

Effective Interventions for Injection Drug Users

Literature Summary

Methadone Treatment

Many articles support the effectiveness of methadone treatment as an HIV prevention intervention for heroin users. The studies show that methadone treatment reduces needle use, sharing and number of sex partners. The studies also show that treatment increases use of condoms. Rather than summarizing each article, this document provides several citations to help users begin to access the literature on this topic.

Gibson DR, Flynn NM, and McCarthy JJ (1999). Effectiveness of methadone treatment in reducing HIV risk behavior and HIV seroconversion among injecting drug users. *AIDS* 13: 1807-1818.

Hubbard RL, Marsden ME, Rachel JV, et al. (1989). Drug Abuse Treatment: A National Study of Effectiveness (Chapel Hill, NC: University of North Carolina Press, 1989), cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

Langendam MW, van Brussel GHA, Coutinho RA, et al. (1999). Methadone maintenance treatment modalities in relation to incidence of HIV: results of the Amsterdam cohort study. *AIDS* 13: 1711-1716.

Rhoades HM, Creson D, Elk R, et al. (1998). Retention, HIV risk, and illicit drug use during treatment: methadone dose and visit frequency. *American Journal of Public Health* 88: 34-39.

Effective Interventions for Injection Drug Users (cont.)

Syringe Exchange

Many articles support the effectiveness of syringe exchange as an HIV prevention intervention for injection drug users. The studies show that syringe exchange programs reduce sharing and increase referrals to drug treatment programs, without increasing injection drug use. Rather than summarizing each article, this document provides several citations to help users begin to access the literature on this topic.

Ashery, RS, Davis H, Davis WH, et al. (1993). Entry into treatment of IDUs based on the association of outreach workers with treatment programs. *Handbook on Risk of AIDS*, Brown BS and Beschner GM (eds.) (Westport, CT: Greenwood Press), cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

Bluthenthal RN, Kral AH, Gee L, et al. (2000). The effect of syringe exchange use on high risk injection drug users: a cohort study. *AIDS* 14: 605-611.

Hagan H, Des Jarlais DC, Friedman SR, et al. (1995). Reduced risk of Hepatitis B and Hepatitis C among injecting drug users participating in the Tacoma Syringe Exchange Program. *American Journal of Public Health* 85: 1531-1537.

O'Brien M, Murray JR, Rahemian A, et al. (1994). Three topics from the Chicago Needle Exchange Cohort Study: seroconversion; the behavior of HIV-positive NX users; and the need for additional prevention around non-needle injection risks. *Annual North American Syringe Exchange Conference*, Santa Cruz, CA, cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

O'Keefe E, Kaplan E, and Khoshnood K (1991). *Preliminary Report: City of New Haven Needle Exchange Program* (New Haven, CT: New Haven Health Department), cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

Oliver K, Maynard H, Friedman SR, et al. (1994). Behavioral and community impact of the Portland Syringe Exchange Program. *Proceedings of the Workshop on Needle Exchange and Bleach Distribution Programs* (Washington, DC: National Academy Press), cited in The Effectiveness of AIDS Prevention Efforts (Washington DC: Office of Technology Assessment).

Effective Interventions for Injection Drug Users (cont.)

Individual-Level

Stephens RC, Feucht TE, et al. (1993) Effects of an Intervention Program on AIDS-Related Drug and Needle Behavior Among Intravenous Drug Users. *American Journal of Public Health* 81(5): 568-571.

POC (African-American Male)	322 (mostly street addicts not in tx) participated in 1:1 counseling delivered by a professionally trained health educator and lasted 45-60 minutes. Session provided basic information on HIV transmission using a segment of a film; discussed sexual risk reduction and condom use; covered ways to reduce risk due to injection drug use and ended with information on HIV testing.	Pre-post results compared baseline to 3-month follow-up interview. Percent reporting injecting decreased from 92 to 71, sharing decreased from 67 to 24. Didn't ask questions about sexual risks.
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Group-Level

Schilling RF, EL-Bassel et al. (1991) Building Skills of Recovering Women Drug Users to Reduce Heterosexual AIDS Transmission. *Public Health Reports* 106(3): 297-304.

Women/ POC	91 African-American and Hispanic women enrolled for at least 3 months in five clinics in a large methadone maintenance program in NYC. Non-peer led skills-building groups held five 2-hour sessions offered to groups of 9-10. Topics included: HIV 101; identification of high-risk sexual practices; discussion of barriers to adopting safer sex practices; discussion of negative associations with condoms; condom use skills; role-played negotiation of condom use; assertiveness; problem solving; and communication skills involving safer sex scenarios. Comparison group received one session of AIDS information routinely provided by the clinic.	The skill-building intervention group showed statistically significant higher use of condoms than those in the control group at follow-up. Participants also more comfortable taking and carrying condoms, talking about safer sex with partners, had more favorable attitudes toward condoms. No drug use differences between groups. <u>Comment:</u> Initial follow-up was 2-week post.
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Effective Interventions for Injection Drug Users (cont.)

El-Bassel N, Schilling RF (1992) 15- Month Follow-up of Women Methadone Patients Taught Skills to reduce Heterosexual HIV Transmission. <i>Public Health Reports</i> 107(5):500-4.		
IDU/ POC (African- Am/ Hispanic)	15-month follow-up of study summarized above (Schilling RF, EL-Bassel et al. (1991) Building Skills of Recovering Women Drug Users to Reduce Heterosexual AIDS Transmission. <i>Public Health Reports</i> 106(3): 297-304).	Compared to the information-only group, women in the skills-building group showed an increase in frequency of condom use at 15 month follow-up. The groups did not differ significantly in number of sex partners.
Des Jarlais CC, Casriel C et al. (1992) AIDS and the Transition to Illicit Drug Injection – Results of a Randomized Trial Prevention Program. <i>British Journal of Addiction</i> 87(3): 493-498.		
	Study to see if teaching safer injecting practices would cause injecting to increase among drug sniffers. 104 NYC HIV-heroin users who were using intranasal (sniffing) as their primary route of heroin use and who had injected no more than 60 times in the previous two years. Trained peer-mediator conducted four 60-90 minute group sessions over a two-week period, which included AIDS 101, safer injection, sexual behavior, and drug abuse treatment programs. Controls filled out surveys that were in-depth interviews.	Significant lower level of injection at follow-up (average follow-up period = 9 months). Did not prevent all drug injection. 15% assigned to the intervention injected during the follow-up period, compared with 33% of those assigned to the control group. There however was no evidence that the intervention was effective at improving safer sex.
Malow RE, West JA et al. (1994) Outcome of Psychoeducation of HIV risk reduction. <i>AIDS Education and Prevention</i> 6(2): 113-125.		
POC/ Drug use (African American cocaine users)	152 African American males at in-patient tx program participated in group-level sessions. Non-peer led, held for 2 hours over 3 consecutive days, 6-8 people. Sessions included HIV knowledge/ risk, demonstrated cleaning works; condom use, condom negotiating, and skills-building exercises; review and discussion of HIV testing procedures.	47.5% of intervention group participants reported having more than one partner at three-month follow-up compared to 76% at the baseline. In the comparison group. The change from 76% at baseline to 59% at the follow was considered to be not statistically significant. Sexual risk taking decreased from 75% at baseline to 32% at follow-up.

Effective Interventions for Injection Drug Users (cont.)

Magura S, Kang S. et al. (1994) Outcomes of Intensive AIDS Education for Male Adolescent Drug Users in Jail. <i>Journal of Adolescent Health</i> 15(6): 457-463.		
Young POC/ drug users	NYC DOC Adolescent Reception and Detention Center. 157 youths aged 16-19, most were African-American or Hispanic. 4 1-hour small-group sessions of eight led by male counselor. Sessions focused on health education issues relevant to male adolescent drug users, with an emphasis on HIV/AIDS. Group activities included role-play and rehearsal techniques.	Youth in the intervention were more likely to use condoms during vaginal, oral or anal sex, had fewer high-risk sex partners, and had more favorable attitudes toward condoms than youth not in the intervention. <u>Comment:</u> None of youth admitted to using injection drugs. Curriculum focused on sexual risk reduction.
Cottler LB, Compton WM et al. (1998) Peer-Delivered Intervention Reduces HIV Risk Behaviors among Out-of-Treatment Drug Abusers. <i>Public Health Report</i> 113(1):31-41		
POC/ African- Am	St. Louis Program (EachOneTeachOne). N=725, 61% male, 93% African-American. A peer role model for out-of-tx crack cocaine users and IDU. Role Models conducted outreach to reach persons on the street spending 5 to 15 minutes contact with users, then random assignment to standard (SI) or enhanced intervention (EI). All participants in two sessions of drug and HIV info and C&T, then EI participants randomly selected to attend four 2-hour peer-led intervention groups on drug awareness, stress management, AIDS, risk reduction for sexual behavior.	3-month follow-up. Over 80% of the sample (both groups) maintained their crack cocaine use at low-level or reduced their use. Enhanced group more likely to reduce risk. Condom use in both groups decreased. Men in EI more likely to reduce crack use than SI men. No difference between women in two groups.

Effective Interventions for Injection Drug Users (cont.)

Deren S, Tortu S. et al. (1993) An AIDS Risk Reduction Project with Inner-city Women, <i>Women and AIDS: Psychological Perspectives</i> . London: Sage.		
POC/ Women (African- Am/ Latino)	<p>Women were randomly assigned to two groups.</p> <p>Group 1: a single group session providing AIDS education and testing/risk reduction referral information.</p> <p>Group 2: three group session, covering the above plus condom use/needle-cleaning and negotiation skills.</p>	<p>Women in both interventions showed significant decrease in average monthly number of unprotected sex acts (37 to 19) and number of partners (31 to 15) in the last 6 months. Increased percent condoms use with main partner (18% to 43%) and with multiple partners (43% to 64%) at 6-month follow-up.</p>
McCusker J, Stoodard AM et al. (1992) AIDS Education for Drug Abusers: Evaluation of Short-term Effectiveness. <i>American Journal of Public Health</i> 82(4): 533-540.		
In drug tx	<p>Massachusetts. 567 clients in a 21-day inpatient drug detoxification program. 67% male, 81% white. Blocked randomization. Group 1: standard AIDS education program typically provided in treatment settings, consisted of two 1-hour group sessions given early or late in tx involving video, lectures, homework, discussion, and demonstrations of condom use and of cleaning drug equipment. Group 2: enhanced intervention, six 1-hour group sessions and a 30 min individual health education consultation that focused on personal susceptibility, situational analysis and skills-building.</p>	<p>Authors disappointed in results. Reduction in risky drug use reported by all groups. Only significant result: enhanced group reported significantly greater reduction in injection frequency than did group 1.</p>

Effective Interventions for Injection Drug Users (cont.)

Community-Level		
Jamner MS, Wolitski RJ et al. (1997) Impact of a Longitudinal Community HIV Intervention Targeting Injecting Drug Users Stage of Change for Condom and Bleach Use. <i>American Journal of Health Promotion</i> 12(1): 15-24.		
General	AIDS Community Demonstration Project in Long Beach California. 3081 IDU who were sexually active in the past 30 days or who had shared injection equipment in the past 60 days. Peer volunteers distributed fliers featuring role-model stories targeted to the population's stage of change. Fliers were packaged with bleach kits, condoms, or both. The intervention was designed to influence behavior through the dissemination of information, the development of behavioral skills and the positive reinforcement of progress toward the consistent use of condoms and bleach. (transtheoretical model of behavior change)	Repeated cross-sectional sampling with matched intervention and comparison communities. Compared with injecting drug users in the comparison area, IDUs in the intervention area showed a significant increase in condom use with other partners. Subjects with recent project exposure had higher stage-of-change scores for using condoms with main and other partners and for cleaning injection equipment with bleach.
Rietmeijer CA, Kane MS et al. (1996) Increasing the Use of Bleach and Condoms Among Injecting Drug Users in Denver: Outcomes of a Targeted, Community-level HIV Prevention Program. <i>AIDS</i> 10(3): 291-298.		
General	AIDS Community Demonstration Project in Denver. N=1997 IDUs interviewed (89% male, 66% African- American or Latino. Volunteers discussed and distributed intervention kits with small-media behavior intervention materials, role model stories, bleach kits and condoms to 890 individuals in high-risk population in Denver on a monthly basis over a 2.5 year period. Workers received training on basic HIV/AIDS education, role-playing interactions, methods of street approach and non-threatening conversation, and methods of dealing with individuals who refuse materials.	Proportion reporting consistent bleach use to clean needles increased significantly from baseline (20%) to early (16%) to full implementation (29%) in the intervention city; but decreased from 22% at baseline to 12% at early and full implementation in the comparison city. Condom use during vaginal intercourse with occasional partner increased significantly from 2% at baseline to 7% at early implementation and to 24% at full implementation of the invention city and decreased from 12% to 10% in comparison city. No change on condom use with steady partner.

Effective Interventions for Injection Drug Users (cont.)

Street and Community-Level		
Latkin CA (1998) Outreach in natural settings: the use of peer leaders for HIV prevention among injecting drug users' networks. <i>Public Health Report</i> 113 (Suppl 1): 151-9.		
POC (African-Am)	Baltimore, Maryland. 36 peer leaders trained to promote prevention among contacts within and beyond sex and drug networks. Peer leaders participated in 10-session training groups were administered pretest and post-test surveys. Survey data also collected from 78 of the leaders' risk network members. Peer leaders had 2165 HIV prevention interactions, of which 84% were with active drug users.	Peer leaders reported a significant increase in condom use and cleaning used needles with bleach. The leaders' risk network members, compared with controls, were significantly more likely to report greater needle hygiene.
Vogt RL, Breda MC et al. (1998) Hawaii's Statewide syringe exchange program. <i>American Journal of Public Health</i> 88: 1403-1404.		
General	Needle exchange (NEP), drug treatment referral system and methadone clinic, and peer-educator program to reach IDU who do not come to the exchange. <u>Comment:</u> Many other studies show effectiveness of NEPs through studies of seroprevalence (Des Jarlais et al. 1995; Hurley et al. 1997)	Rates of HIV among IDUs have dropped from 5% in 1989 to 1.1% in 1994-96. Also, 74% of NEP clients reported no sharing of needles in the last 30 days, and 44% of those who did share reported always cleaning needles with bleach.

Effective Interventions for Injection Drug Users (cont.)

Coyle SL, Needle RH et al. (1998) Outreach-Based HIV Prevention for Injecting Drug Users: A Review of Published Outreach Data. <i>Public Health Report</i> 113(1): 19-30.		
General	Review of 36 published studies of outreach-based HIV risk reduction interventions for out-of-tx IDUs. Reports intervention effect on HIV-related behaviors or HIV seroincidence. Most from National AIDS Demonstration Research (NADR) or Cooperative Agreement for AIDS Community-based Outreach/Intervention Research Program—both models used a standard outreach with C&T and enhanced outreach with follow-up of counseling, role-playing, etc.). 2/3 of interventions were street-based outreach followed by office-based HIV C&T.	Most results are pre-post, no controls. Consistency of results across studies. IDUs regularly reported follow-up reductions in 5 major risk behaviors: stopping injecting, reducing frequency of injecting, reducing reuse of syringes, reducing reuse of other equipment, reducing crack use. Studies also show significant effects in 3 protective behaviors: more frequent needle disinfecting, entry into drug tx, and increases in condom use.
Siegal HA, Falck RS et al. (1995) Reducing HIV Needle Risk Behaviors Among Injection-Drug Users in the Midwest: An Evaluation of the Efficacy of Standards and Enhanced Interventions. <i>AIDS Education and Prevention</i> 7(4): 308-319.		
POC (African Am)	NADR site. 907 participants (74% male, 75% African-Am) assigned to one of two types of standard or enhanced intervention. Standard: a one-hour session (in the field office) which the counselor-educator provided details on HIV disease and modes of transmission and an instructional session which was followed by a videotape of role plays illustrating proper condom use and needle cleaning. Bleach and condoms provided. Enhanced: added to the standard intervention three one-to two-hour sessions on the pathology of HIV disease, drug addiction and safer sex. These were delivered over a one-month period in group sessions of 3-5 people. All participants received voluntary and confidential HIV counseling/testing as well as knowledge of negative results.	Follow-ups 5 to 9 months after baseline. Both interventions appeared to improve needle practices. The enhanced intervention showed more effectiveness in helping those with unsafe practices to become more safe, but did not appear to be more effective at helping those practicing safer needle practices maintain those practices. In multivariate analysis, subjects in enhanced more likely to change from unsafe to safe needle use. Regardless of intervention track, daily injectors less likely to adopt safer injecting practices than weekly or occasional injectors.

Effective Interventions for Injection Drug Users (cont.)

Wiebel WW, Jimenez A, Johnson W et al. (1996) Risk behavior and HIV seroincidence among out-of-treatment injection drug users: A four-year prospective study. <i>Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology</i> 12: 282-289.		
POC	NADR site. Monitored trends in HIV risk behaviors and seroconversion among out-of-treatment IDUs receiving street-based outreach in Chicago. Began 1988, followed 641 HIV-IDUs for 4 years. Intervention guided by Indigenous Leader Outreach Model. Ex-addicts delivered HIV prevention services targeting IDU social networks in community settings. Collected baseline and 6 waves of follow-up interview data. Subjects came from 3 low-income neighborhoods: African-Am, ethnically mixed, and Puerto Rican.	Observed HIV incidence decreased, from 8.4 to 2.4 per 100 person-years. Prevalence of drug risk behaviors (sharing needles or equipment without disinfecting) decreased, from 100% to 14%. Sex risk behavior (multiple partners, sex with an IDU, or not always using condoms) decreased, from 71% to 45%.

Intervention Combination

Tross S, Abdul-Quader AS et al. (1993) Evaluation of a Peer Outreach HIV Prevention Program for Female Partners of Injecting Drug users (IDUs) in New York City. <i>IX International Conference on AIDS</i> 9,840.		
Women	658 Female sex partners of IDU residing in a high use housing project. Peer outreach/media distribution of flyers containing risk reduction strategies of actual peer models occurring in 2 randomly selected housing projects. Two non-intervention housing projects provided a comparison sample.	At follow-up, there was no change in condoms use or intention to use condoms in the comparison sample, while the intervention sample showed increased percentage always using condoms (18% to 30%) and decrease percentage never using condoms(46% to 27%).

Effective Interventions for Injection Drug Users (cont.)

Powers B, Penn S et al. (1990) AIDS Risk Reduction Among Female IVDUs and female sexual partners of IVDUs, 1988-1989. <i>VI International Conference on AIDS</i> 6, 421.		
Women	Female IDU and female sex partners of IDUs contract via street outreach were reached individually (4, 724) or in groups (7,829). The intervention was to study the 'early' and 'late' outreach efforts were compared, looking at reports of participants in 'safer sex workshops.' Other outreach efforts included provision of condoms and needles, referrals, group and individual counseling and client advocacy.	In early workshops, 15% reported regularly or always using condoms; in later workshops, this increased to 50% (no statistical analysis).
Kipke MD, Edgington R et al. (1998) HIV Prevention for Adolescent IDUs at a storefront needle exchange program in Hollywood, CA. <i>Presented at the 12 The World AIDS Conference</i> , Geneva Switzerland. Abstract #23204.		
Youth (24 and under)	Needle exchange targeting young IDUs, which contains, art programming, peer-support groups, HIV testing and case management (largest youth NEP in the US).	Over 70% of clients reported no needle-sharing in the last 30 days, and young people who used the NEP on a regular basis were less likely to share needles.
Nyamathi AM, Flaskenis J et al. (1994) Evaluation of Two AIDS Education Programs for Impoverished Latina Women. <i>AIDS Education and Prevention</i> 6(4): 296-309.		
POC Women drug using/homeless	858 women in homeless shelter participated. Control group receive 1 hour AIDS education and testing small group. The test group received a 2 hour program with testing individualized, behavior practices, coping, self-esteem. Video in both groups.	At 2 weeks post test, both conditions associated with reduction in risk (injection drug use, non-injection drug use, and sexual activity with multiple partners). No effects of specialized intervention. <u>Concern:</u> Very short follow-up.

Effective Interventions for Injection Drug Users (cont.)

Harris R, Kavanagh S, Bausell, H (1998) An intervention for changing high-risk HIV behaviors of African-American, drug dependent women. <i>12th World AIDS Conference, Geneva 1998</i> [Abstract No. 13402].		
POC/ Women (African-Am)	204 methadone-dependent, African-American women randomized into experimental and control groups. Experimental group participated in peer counseling and leadership training program over an 8-week period, followed by 8 weeks of reinforcement. Program designed to reduced sexual risk behavior, increase self-esteem, decrease depressive affect, and increase AIDS knowledge	Compared to controls, experimental group reported significant increase in numbers of safer sexual behaviors, showed decreases in depression, and reported engaging in more AIDS-related, community-based communication activities.
Monterroso ER, Hamburger ME, Vlahov D, et al. (2000) Prevention of HIV infection in street-recruited injection drug users. <i>Journal of Acquired Immune Deficiency Syndromes</i> 25: 63-70.		
	CIDUS (Collaborative Injection Drug User Study), multicity study (Baltimore, NYC, Chicago, San Jose, LA, and a state women's correctional facility in CT). 3773 participants recruited and 2306 located and interviewed at follow-up (average follow-up period=7.8 months). HIV serostatus and participation in programs and behaviors that could reduce risk of HIV infection determined at each visit.	Not using previously used needles substantially protective against acquiring HIV and significantly associated with use of needle and syringe exchange programs. Reduction of injection frequency very protective against seroconversion and strongly associated with participation in drug tx programs. Cleaning needles not protective.

HIV Antibody Counseling & Testing

Higgins DL, C Galavotti et al. (1991) Evidence for the Effects of HIV Antibody Counseling and Testing on Risk Behaviors. <i>Journal of American Medical Association</i> 266(17): 2419-2429.		
	A review of 12 studies on the effects of C/T on behavior change (needle use, cleaning of needles and condoms use) of injection drug users (actual study reviews several populations).	From the 12 studies the results were: 50% of the studies showed some increase in needle hygiene; 42% showed decrease in needle or drug use; 25% showed increase in condom usage and, 17% showed decrease sexual partners.

Effective Interventions for Injection Drug Users (cont.)

Casadonte P, Des Jarlais D. (1990) Psychological and Behavioral Impact among Intravenous Drug Users of learning HIV test results. <i>The International Journal of Addiction</i> 25(4): 409-426.		
POC	81 drug users tested and informed of HIV positive results.	Giving positive test results were associated in decrease in sex (60%) at a 10 week follow up and more condom and less drug use

Neaigua A, Sufian M et al. (1990) Effects of Outreach intervention on risk reduction among IDU. <i>AIDS Education and Prevention</i> 2(4): 253-271.		
POC	276 IDU were reached by street educators who were ex-addicts, provided easy referral for HIV testing. No control group.	4.5 month follow-up. Drug use in last 30 day decreased, times injected decreased; 84% tested – half not return for results.

Partner Notification

Levy JA, Fox SE (1998) The Outreach-assisted Model of Partner Notification with IDUs. <i>Public Health Report</i> 113(S-1): 160-9.		
General	Chicago. 386 IDU participated. 63 (16%) tested HIV positive; 60 post-test counseled. Randomized to “self-tell” vs. “enhanced” groups.	In “self-tell” group marginal locating information given for at least 142 (50% injecting, 25% sex, 25% both). 82% of IDU in the “enhanced” group wanted the outreach worker to do the partner notification, and 70% of partners notified were done by outreach state. IDUs wanted assistance in partner notification and were cooperative.

Giesecke J, Ramstedt K, Granath F, Ripa T, Rado G, Westrell M (1991). Efficacy of partner notification for HIV infection. <i>Lancet</i> 338(8775): 1096-1100.		
IDU	Stockholm, 1989-1990. 365 infected patients (91% of those diagnosed in Sweden during the interval) named 564 needle-sharing or sexual partners.	390 located, 350 with known test results. 50 new seropositives identified.

Effective Interventions for Injection Drug Users (cont.)

No reviews on Mass & Other Media, Social Marketing, Hotlines, and Clearinghouse.